JOINT MANAGEMENT PLAN REVIEW
DRAFT ACTION PLAN: Wildlife Disturbance- Marine Mammals, Seabirds & Turtles

REVISED: March 11, 2003

***Please Note**: The MBNMS and the Sanctuary Advisory Council have tasked the management plan working groups with development of draft action plans that characterize the issue or problem and identify strategies and activities that address the issue. The working groups will develop these strategies and activities over the next several months. With this goal in mind, the progress of the group, the decisions, and areas of agreement will be outlined in a progressively developed action plan identifying draft goals, issue characterizations, and strategies and activities. Members of the group as well as other interested parties should look to this draft action plan as it develops as a way of tracking the group's progress and decisions.*

Introduction

The Sanctuary has one of the most diverse and abundant assemblages of marine animals in the world, including six species of pinniped, thirty-three species of cetacean, four species of sea turtles, ninety-four species of seabirds and one species of sea otter (fissiped).

The Sanctuary is mandated to approach resource protection from a broad, ecosystem based perspective. This requires consideration of a complex array of habitats, species, and interconnected processes and their relationship to human activities.

The Sanctuary provides many opportunities for wildlife viewing, including whale watching, bird watching, observation of pinniped pupping, haulout activities, and tidepooling. With the multitude of opportunities for observing and interacting with nature comes the potential for wildlife disturbance which may result in impacts on marine resources such as: flushing of birds from nesting sites, pinnipeds abandoning pups, potential harassment or even death to wildlife. Certain recreational activities such as kayaking or scuba diving, and some commercial activities such as low flying aircraft and fisheries interactions have the potential to harm or disturb marine mammals and seabirds.

Public awareness is necessary to effectively address wildlife disturbance issues since most people who choose to view marine wildlife do not intend to place the animals or themselves at risk. While it has been well established that it is harmful and dangerous to closely approach, handle or feed terrestrial wildlife (e.g., bears, deer, raccoons, nesting

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birds, etc.), many people do not yet seem to understand that these concerns also apply to marine wildlife.

Types of Wildlife in the MBNMS

The MBNMS is known both nationally and internationally as a veritable 'hot spot' for viewing marine life. There is significant interest and public participation in activities found in the region that offer wildlife viewing accessibility. Following is a description of species present in the MBNMS.

Cetaceans:
Of the thirty-three species of cetaceans seen in the Monterey Bay area, about one-third occur with frequency. Five of the whales are listed as endangered species: the Blue, Fin, Humpback, Right, and Sperm. Cetaceans such as Humpback whales, Right whales, Minke whales, Fin whales, Blue whales and Killer whales also inhabit the waters within the MBNMS. The highest concentration areas of cetaceans are within the southern and central portions of the MBNMS.

Pinnipeds:
There are a total of 9 rookeries/colonies in the MBNMS. The five species of pinnipeds considered common in the Monterey Bay area include California sea lions, Steller sea lions, Northern elephant seals, Northern fur seals, and Pacific harbor seals. An additional species, the Guadeloupe fur seal, has been reported from records of sick animals stranded on the beach.

Seabirds and shorebirds:
Sanctuary waters are among the most heavily used by seabirds worldwide. Ninety-four species of seabird are known to occur regularly within and in the vicinity of the Sanctuary, and approximately ninety species of tidal and wetland birds occur on the shores, marshes, and estuaries bordering Sanctuary waters.

Several environmental features are responsible for the diverse assemblage of birds in the area, such as the Monterey Bay being located on the Pacific Flyway, allowing the birds a place to stopover during both north and south migrations between southern wintering grounds and northern breeding sites. The upwelling of nutrient-rich waters adjacent to the submarine canyon support highly productive food webs which provide abundant seabird prey, as well as the diversity of habitat types along the shore which increases the variety of bird species utilizing the MBNMS.

Fissipeds:
The California or Southern sea otter is a threatened species that is found throughout the shallow waters of Monterey Bay from Pismo Beach to Año Nuevo Island. Sea otters inhabit a narrow zone of coastal waters, normally staying within one mile from shore. They forage in both rocky and soft-sediment communities as well as in the kelp understory and canopy. They seldom are found in open waters deeper than 30 m, preferring instead the kelp beds, which serve as vital resting, foraging, and nursery sites. Otters are an important part of the marine ecosystem. By foraging on kelp-eating macroinvertebrates (especially sea urchins) sea otters can, in many instances, influence the abundance and species composition of kelp assemblages and animals within nearshore communities (Riedman, 1987).

Turtles:
The MBNMS is home to four species of sea turtles that frequent its waters —the Green, Pacific Ridley, Leatherback and Loggerhead sea turtles. The leatherback is the most common. It is the largest turtle in the world and has the widest geographic range of any reptile. It is found in all of the world's major oceans and has been observed from the Artic Circle to the edges of the Antarctic convergence zone. Leatherbacks are also one of the deepest diving animals known—descending to depths in excess of 1,300 meters. The leatherback is the world's most endangered sea turtle with populations in the Pacific Ocean declining at a disastrous rate. Since 1980 populations have dropped by more than 90%, and the accidental killing of leatherbacks by high seas commercial fishing fleets is a major contributor to that decline.

Endangered Species:
Of the more than 116 federally listed threatened or endangered species (55 percent of all species nationwide) in California, twenty-six reside within the Sanctuary.

For additional information on species found within the Sanctuary visit the MBNMS site characterization at: http://montereybay.nos.noaa.gov/sitechar/welcome.html

Potential Disturbance Activities within the MBNMS

Over the last twenty years, increasing numbers of people have been seeking opportunities to view and experience marine wildlife. For the most part, wildlife viewing has resulted in many positive benefits including new economic opportunities for local communities, and increased public awareness and stewardship for marine resources. However, there is growing evidence that marine wildlife can be disturbed and/or injured when viewing activities are conducted inappropriately.

Frequent disturbance has the potential to adversely effect marine species. The effects of disturbance can be especially critical during sensitive time periods, such as feeding, breeding, resting, or nesting. Disturbance is likely to cause avoidance reactions and may result in interruptions of social behavior of animals and is capable of leading to long-term changes in distribution.

Motorized and Non-motorized Vessels:
The use of motorized or non-motorized vessels (outboard or inboard boats, kayaks, canoes, underwater scooters, or other types of water craft) to interact with marine mammals in the wild is a rapidly growing activity nationwide. For example, NMFS and the MBNMS have received complaints from members of the public that include operators of motor vessels driving through groups of dolphins in order to elicit bow-riding behavior, whale watching vessels getting too close to whales or chasing animals in order to get a better view of them, and kayakers utilizing the quiet nature of their vessels to approach too close to sea otters. All of these actions cause animals to exhibit avoidance responses resultant from the interactions.

Fireworks:
Fireworks displays over the Sanctuary have been traditionally conducted as part of national and community celebrations and foster public use and enjoyment of the marine environment. However, fireworks displays have the potential to cause unacceptable levels of disturbance in certain areas. The MBNMS has worked with the National Marine Fisheries Service and the US Fish and Wildlife Service in developing solutions to this issue; it is expected that final implementation of those guidelines will occur in 2003. Traditional community fireworks displays will be allowed to continue at the existing locations, but there will be constraints on the number allowed per year, as well as designated zones where fireworks will be prohibited.

Overflight Impacts:
Potential impacts from low-flying aircraft are addressed by a specific prohibition on flying under 1000 feet in designated overflight zones with sensitive wildlife. Some implementation problems have occurred due to pilot's lack of understanding and acknowledgement of the zones since they are not noted on aeronautical charts. MBNMS has begun an outreach campaign to pilot associations on the zones and the impacts of low flights, and is working to include notations on the FAA aeronautical charts. Additional outreach may be required to reach aviation companies which may be conducting whale watching trips within the Sanctuary Overflight Restriction Zones, as this activity is also known to cause animals to exhibit avoidance responses resultant from the interactions.

How does the MBNMS currently address Wildlife Disturbance?

MBNMS addresses wildlife disturbance through a mix of educational outreach, regulations and enforcement. Sanctuary regulations explicitly prohibit harassment of marine mammals (as defined under the Marine Mammal Protection Act), sea turtles and birds. Other Sanctuary regulations relating to wildlife disturbance include restrictions on flying motorized aircraft below 1,000 feet in three designated sensitive areas, a prohibition on attracting white sharks, and restrictions on the use of motorized personal watercraft. Non-regulatory measures are also used by the Sanctuary to address wildlife disturbance, and include a variety of education and outreach activities and products.

There are several docent programs in high visitor use areas in the MBNMS. Some programs have been enacted to address concerns at specific locations such as the State or County Parks Programs at Point Lobos and the Fitzgerald Marine Reserve, other docent programs are more regional. Below is a description of MBNMS programs that enlist the help of specifically trained and educated volunteers.

Team OCEAN:
An effort to address the disturbance of marine mammals and seabirds by recreational users of the Sanctuary was launched by the Sanctuary during the fall of 2000, and is now in its 3rd year. The Team OCEAN summer outreach program employs on-the-water education efforts for the Monterey Peninsula and in Elkhorn Slough to prevent kayakers from approaching marine mammals such as sea otters too closely. Similarly, the Sanctuary has assisted in reducing harassment of the elephant seal population at Piedras Blancas, a location very near the highway where tourists were closely approaching the animals. These efforts have included assisting local nonprofit organizations in establishing an observer and docent network for the elephant seal haulout sites to facilitate observation opportunities at safe distances and locations, and improving interagency enforcement for cases where an educational approach has not sufficed.

Beach COMBERS:
In 1997 a volunteer beach-monitoring program (Beach COMBERS: Coastal Ocean Mammal/Bird Education and Research Surveys) was established by the MBNMS and Moss Landing Marine Labs, to obtain information on rates of stranding for all Sanctuary marine birds and mammals. In addition, mortality events are detected, causes of mortality events are assessed, and oil and tar deposition is monitored. Some success stories to date include the discovery of banded birds from as far away as Hawaii; detection of unusually high numbers of dead adult harbor seals in localized areas; and a high deposition of Common Murres (a diving seabird), which led to the discovery of a previously unrecognized threat of gillnet mortality for Common Murres, harbor porpoise, and sea otters. The Beach COMBERS program has recently been expanded to Cambria,

in the southern Sanctuary region. This program can help detect wildlife mortality patterns, although there often are a variety of possible causes of death.

Friends of the Elephant Seal:
The Friends of the Elephant Seal (FES) is a non-profit organization, formed in 1997. It is dedicated to educating people about elephant seals and other marine life and to teaching stewardship for the central coast of California. The organization puts volunteers through a comprehensive training program, using local experts. Volunteers work at the elephant seal viewing site year-round, 7 days a week, from 10 - 4. Docents make over 150,000 contacts per year, with visitors coming from all over the world. The program redirects visitors to appropriate viewing sites and advises visitors of safe viewing practices. MBNMS has provided funding for signage at the main viewing site, and serves as an advisory member to the Board of Directors, participates in the docent trainings, and provides general assistance and support. Currently, the FES is without an Executive Director and doe not have secure funding.

BAYNET:
BAYNET, an all volunteer, non-profit organization founded in 1996, is dedicated to the protection of natural resources and educating people about the wonders of the ocean and the living marine resources in California's Monterey Bay region. During the program's first four years, BAYNET volunteers spoke with more than 200,000 visitors from all over the world. In the year 2000 alone, BAYNET volunteers donated 1,700 hours of service. The MBNMS provides staff assistance and partial funding for the program. Recently, BAYNET lost the bulk of its funding and is actively seeking funding opportunities.

Watchable Wildlife:
The Watchable Wildlife program is a unique partnership of federal and state wildlife agencies and non-profit organizations working to educate the public and commercial operators about safe and responsible wildlife viewing practices. The program has three immediate goals: (1) enhance public wildlife viewing opportunities; (2) provide education about wildlife and its needs; and (3) promote active support of wildlife conservation. Within NOAA, the National Ocean Service (through the National Marine Sanctuary Program) and the National Marine Fisheries Service (through the Office of Protected Resources) have been working together with the Watchable Wildlife program partners over the past five years to develop a “Watchable Wildlife” program specifically for marine species and habitats. The main purpose of the program is to provide the public with information about appropriate wildlife viewing practices for the marine environment that are consistent with wildlife protection laws and conservation efforts.

Regulations
Harassment within the Sanctuary is governed by a complex array of multi-jurisdictional laws and regulations such as the National Marine Sanctuaries Act, the Endangered Species Act, the Migratory Bird Treaty Act, and the Marine Mammal Protection Act. The following activities are prohibited within the Sanctuary: exploring for, developing or producing oil gas or mineral; discharging materials (with certain exceptions); altering the seabed; disturbing marine mammals sea turtles and birds; attracting white sharks; moving, removing or injuring a Sanctuary historical resource; possessing any historical resource, marine mammal, sea turtle or seabird; and flying motorized aircraft below 1,000 feet in certain areas.

Enforcement:
The shoreline of the MBNMS is approximately 300 miles long. The MBNMS has one dedicated NOAA Office of Law Enforcement agent to respond to potential violations of Sanctuary regulations. The Sanctuary relies heavily on collaborations with other cross-deputized partners such as the Department of Fish and Game and State Parks to assist with Sanctuary enforcement. As might be expected with one dedicated agent responsible for coverage of an area the size of Connecticut, this enforcement agent has limited capabilities.

The MBNMS also funds a half-time law enforcement officer working in the Cambria area, who assists with enforcement issues during the elephant seal pupping season and collaborates with the Friends of the Elephant Seal docents.

The MBNMS currently addresses some of these harassment issues through regulatory measures such as: prohibitions of white shark attraction, marine mammal and seabird harassment, over-flight restrictions for sensitive areas; as well as non-regulatory measures and other education and outreach efforts to minimize impacts to living marine resources. However, major disturbances to marine mammals and seabirds continue to be a major issue within the MBNMS and will be addressed in this Management Plan Review. A framework and strategies to address this issue will be incorporated and implemented as part of this site-specific action plan.

Strategies to be pursued in the Work Group
Despite the initial efforts outlined above, many species in the Sanctuary warrant further protection via outreach, education, enforcement or other strategies designed to inform the public and specific user groups of the need to prevent wildlife disturbance within the MBNMS. The goal of this working group is to develop a framework of protective measures for human interactions with marine mammals, seabirds, and turtles through wildlife viewing and aircraft overflights in the Sanctuary**.** The initial phase will focus on

identifying gaps in the existing system of protection and formulating a plan to jointly develop specific, more detailed, recommendations for those topics which have emerged as priorities.

Potential Management Strategies
As a starting point for identifying potential strategies to address this issue, the Workgroup has begun developing some recommendations from a preliminary discussion list and will work at future meetings to refine the following:

STRATEGIES OF THE WILDLIFE DISTURBANCE- MARINE MAMMALS, SEABIRDS AND TURTLES ACTION PLAN

STRATEGY #1 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY VESSELS

This strategy recognizes the need to address the issue of disturbance by vessels. The following vessels are often a source of disturbance to seabird colonies, rookeries, haulout areas, or whales, when operating in sensitive areas: inflatables carrying scuba divers, whale watching vessels, kayaks, and military activities.

ACTIVITY A: Finding, modifying, and developing behavioral guidelines
Potential ways to address the above issues include identifying existing guidelines and adapting to this area, where appropriate. Develop and distribute behavioral guidelines for approaching seabirds, marine mammals, and turtles. Whale watching guidelines should be developed to mirror those produced by NOAA and used at the Hawaiian Island Humpback Whale Sanctuary (HIHWNMS).

Behavioral guidelines should be packaged in such a way as to focus on the behavioral stress patterns of the animal. Recommendations for vessel maneuvering should be included which outline how to avoid the animal from certain directions and speeds.

The MBNMS website shall be further utilized to post information pertaining to wildlife observation. Restaurants, dive shops, tour operators, and hotels would be able to link directly to the posted information as a way to provide guidance to their customers.

Project status;
Potential partners: Watchable Wildlife, NMSP
Estimated costs:

ACTIVITY B: Continue and strengthen Team Ocean

Continue and strengthen the MBNMS Team OCEAN program, which educates on-the-water kayak users in an effort to prevent disturbance or harassment. Efforts are underway to attach signage to kayaks, which outline various marine species and guidelines for approaching them. This signage should be distributed at boating supply stores, kayak shops, or other commercial venues. Additional training should be done to local kayak and scuba diving shops, in order to reduce adverse reactions in species of concern.

Project status:
Potential partners:
Estimated costs:

ACTIVITY C: Outreach and promotion of behavioral guidelines to boaters

Expand outreach to boaters to educate them on wildlife observation guidelines. Information should be posted at the launch ramps, however this may not reach a significant number of the intended audience. A Dock Walkers program, in which educators encounter users at the harbor and educate them, on an opportunistic basis, about wildlife viewing, may nicely supplement signage and should be implemented seasonally during high usage times. Consideration should be given as to how to best reach boaters from out of the area. Perhaps working in collaboration with the CA Department of Motor Vehicles and providing educational information to be enclosed with the vessel registration information that the Department sends out on an annual basis.

ACTIVITY D: Outreach and promotion of behavioral guidelines to whale watching vessels

Training and outreach to vessel operators should commence to ensure that operators are familiar with the parameters of the Marine Mammal Protection Act (MMPA), and operate their vessels within those confines. Whale watching vessels should begin to have on-board naturalists to educate the community and support cooperation among the whale watching community similar to the Sanctuary Naturalist Corps Volunteer model used at the Channel Islands National Marine Sanctuary. The CINMS has developed an MOU with whale watching operators in which trained naturalists ride aboard the vessels, at no

cost to the company, and interpret wildlife natural history to paying passengers. Both the operators and the naturalists attend a workshop before participation in the program. The whale watch operators in the CINMS have been advertising their participation in the program. That, and having trained naturalists onboard seems to have increased their business.

Project status:
Potential partners:
Estimated costs:

ACTIVITY E: Increased inter-agency coordination Consultation between other Federal Agencies:

Current regulations require other federal agencies to "consult" with the MBNMS when planning projects within Sanctuary boundaries. There is opportunity for improvement in this process when considering military activities that occur within the Sanctuary. Though "consultation" is required, the military often overlooks this requirement. Outreach to military environmental liaisons should be conducted to ensure that the military is well versed in MBNMS requirements, which will aid the MBNMS in being aware of various proposed projects.

Project status:
Potential partners:
Estimated costs:

STRATEGY #2 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY LOW FLYING AIRCRAFT

This strategy recognizes the need to address and reduce the issue of disturbance by low flying aircraft. Low flying aircraft are known to cause seabirds, pinnipeds, and whales to exhibit avoidance responses resultant from the interactions. There are a variety of user groups associated with this activity, which may require different strategies in addressing the problem. The following actions and user groups are of concern: permitted and non-permitted actions, commercial film making flight operations; private non-profit aviation, military and other agencies, (such as the USCG), helicopters vs. planes, and other potential actions.

ACTIVITY A: Resolution with the FAA

Getting Sanctuary overflight regulations on the aeronautical charts is critical. The MBNMS should continue discussions and coordination with the NMSP headquarters who are working with the FAA legal staff to resolve this issue.

Project status:
Potential partners:
Estimated costs:

ACTIVITY B: Outreach to pilots

Potential strategies to address the above issues include a mix of educational outreach and enforcement. The MBNMS has begun conducting outreach to various pilot associations—this program should be broadened to encompass a larger number of pilots. An educational poster is in the development stage for distribution. This poster should be distributed to municipal airports, pilot training schools and flight schools, websites, aviation clubs, and other appropriate venues.

Brochures should be developed which outline the hazards created by low flying aircraft and distributed to appropriate users. A mass mailing of educational materials to registered aviators may be helpful in making pilots aware of Sanctuary concerns. Submittal of articles to *In Flight* magazine may be another avenue to pursue in the effort to reach pilots.

It has come to the attention of the MBNMS that there are a few private airstrips along the Big Sur coast. Outreach should be conducted to the owners of these airstrips to determine if the need to conduct landing operations below the 1000-foot overflight

restriction zone exists. Further evaluation is needed of the potential impacts to MBNMS resources from overflight activity based in this area.

ACTIVITY C: Research and monitoring
An evaluation of key geographical areas should be undertaken to understand priority concern locations and disturbance frequency of these areas. A list of desirable sites that the film industry is often interested in should be evaluated and monitored for potential impacts. Identification of the aircraft types should be valuable in formulating an educational approach to the issue.

Project status:
Potential partners:
Estimated costs:

ACTIVITY D: Outreach to film commission
Further outreach should be conducted to local filmmaking commissions to make them aware of the sensitive Sanctuary resources, and the appropriate optimal seasonal operation "windows". Pending the results of monitoring of potential sites, a quota system for production company flights may be established to ensure protection of Sanctuary resources.

Project status:
Potential partners:
Estimated costs:

ACTIVITY E: Permit guidance
Advance coordination and development of seasonal restrictions in concert with other regulatory agencies would be a useful guide. In this way, agencies and industry would be aware of cumulative restrictions in advance, rather than reacting to various permit requests for this activity on a case-by-case basis. The agency guidance should include language which addresses aircraft type, altitude and location recommendations.

Project status:
Potential partners:
Estimated costs:

STRATEGY #3 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY SHORE-BASED HARASSMENT

This strategy recognizes the need to address and reduce shore-based disturbance. Disturbance is know to cause seabirds, shorebirds, and pinnipeds, to exhibit avoidance responses resultant from the interactions. There are a variety of species associated with this activity, which may require different strategies in addressing the problem. All species of marine mammals are protected by the Marine Mammal Protection Act. Violation of the Act is also a violation of Sanctuary regulations, however, disturbances are frequently occurring. The following species listed below, have been deemed to warrant further discussion by the group:

Initial questions for the group to consider in developing strategies to address this issue are whether these should be categorized by species, location (mainland vs. off shore rocks), or reproductive status (breeding vs. non breeding). The following categories have been identified as a concern:

- Pinnipeds
- Elephant seals
- Harbor seals
- Sea lions
- Seabirds—roosting pelicans, nesting birds on offshore rocks
- Snowy plover impacts from beach activities
- Shorebird foraging disturbance on beaches
- Remote controlled airplanes may be a disturbance mechanism during the breeding season

ACTIVITY A: Wildlife viewing guidelines

Potential strategies to address the above issues include the drafting of appropriate guidelines for interacting with species of concern, which will complement the efforts listed in Strategy #1.

Project status:
Potential partners:
Estimated costs:

ACTIVITY B: Outreach

The Friends of the Elephant Seal program should be strengthened to ensure that volunteers continue to be available to interact with the public. Other volunteer-based programs such as BAYNET and Watchable Wildlife may warrant consideration for adoption, implementation, or assistance with other MBNMS programs.

Signage at the state parks, to complement docent programs, such as the Friends of the Elephant Seal, may be valuable in placing in areas adjacent to the assembly of wildlife. The MBNMS should work with state parks and other sites that have intense visitor usage, to identify strategies to reduce wildlife disturbance. It may be useful for the MBNMS to draft a weekly column in a local newspaper which would outline various educational components for the general public. The articles should offer seasonal information on various species, viewing protocols, pollution reduction tips, or other items of interest.

Project status:
Potential partners:
Estimated costs:

ACTIVITY C: Remote controlled airplanes

Remote controlled airplanes operating in areas of high seabird and shorebird concentration can be of concern as they have the propensity to cause flushing events. This activity can be particularly problematic when conducted in areas such as Elkhorn Slough which hosts a significant number of Sanctuary resources. The MBNMS should investigate the frequency and effects of this activity, and where appropriate, work with local municipalities to ensure that the activity is not occurring in highly sensitive habitat areas. Signage and outreach should be in place to educate the hobbyists on potential impacts their actions may cause.

Interpretation of MBNMS regulations should be evaluated to determine if the prohibition on motorized aircraft includes the operation of remote controlled airplanes.

STRATEGY #4 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY MARINE DEBRIS

Levels of debris in both the ocean and at the land-sea interface are of growing concern. This strategy recognizes the need to address disturbance by marine debris. Various types of debris are known to have adverse effects on marine species. Plastics in the marine environment never fully biodegrade. DDT and other hydrophobic compounds are known to adhere to plastics. Ingestion and entanglement are one of the many problems associated with marine debris, which may eventually lead to death for many organisms. The following list identifies priority types of marine debris: balloons, abandoned/discarded fishing gear, plastics and styrofoam, and consumer goods including 6-pack rings, plastic shopping bags, etc.

Potential strategies to address the above issues include:

ACTIVITY A: Education and outreach
Develop, adapt, conduct, or support an educational program which illustrates the problems associated with marine debris. Determine how to best make this information available to the general public. While the focus of this strategy would be to address plastics in the marine environment, opportunity also may exist to remind people that cigarettes are also trash and a form of marine debris. Give the media photo opportunities of wildlife that have been adversely affected by debris, such as entangled animals, and inform them of the issue. Publicity should be given to information about the location where pelagic plastics accumulate and the connection to both land-based and offshore actions. The MBNMS shall evaluate sources of plastic debris and develop a targeted education program.

The MBNMS may be able to develop public service announcements that educate the public on the concerns and solutions to the issue. Integrate educational component about debris into education strategy.

ACTIVITY B: Monitoring of marine debris
The MBNMS will work with the Ocean Conservancy and the Coastal Commission to develop a database to track and characterize the type, location and amounts of marine debris collected through Coastal Cleanup efforts. Monitoring results will be integrated into the MBNMS SIMoN program.

Project status:
Potential partners: Ocean Conservancy, American Plastics Council,
Estimated costs:

ACTIVITY C: Balloon education
Developing informational tags to be placed on commercial helium tanks, which illustrate the hazards of releasing balloons into the environment.

Project status:
Potential partners:
Estimated costs:

ACTIVITY D: Notification of abandoned gear recovery program
Abandoned or discarded gear could be reduced by implementing a notification and recovery program to collect fishing gear similar to the program created in the Northwest Hawaiian Islands in which derelict fishing gear is recovered. Educational efforts to fishermen and other users regarding the adverse effects of lost gear and debris may be valuable.

The US Coast Guard will retrieve abandoned fishing gear if it is deemed to be a hazard to navigation. The MBNMS should encourage the USCG to, where possible, recover derelict fishing gear. Investigations should be undertaken to determine if other entities exist to aid in this goal.

Project status:
Potential partners:
Estimated costs:

ACTIVITY E: Debris reduction efforts to municipalities
Local consumers, businesses, tourists, and residents should be made aware of the hazards associated with marine debris. Identification of the priority debris types could be valuable in formulating an educational approach to the issue. Education efforts, in general, have been found to be more effective at the source of the problem than end-based solutions. However, concerted educational efforts to municipalities should be conducted in order to urge various municipalities to install storm shields or catchment basins over storm drains, which would potentially reduce the amount of post consumer garbage from entering the ocean. Volunteer based creek cleanups should be conducted in advance of wet weather, which may reduce the amount of plastics entering the marine environment.
Further education should be conducted on the chain of production

Project status:
Potential partners:
Estimated costs:

STRATEGY #5 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY COMMERCIAL HARVESTING RELATED ISSUES

This strategy recognizes the need to address disturbance by commercial harvesting related issues – the following list identifies potential issues the workgroup is concerned with:

- Light disturbance on pelicans,
- Petrels, auklets, and sea otters from squid fishing, (lights)
- Disturbance via kelp harvesters,
- Bycatch from fishing gear and aquaculture (turtles and seabirds)
- Nearshore fishery impacts to seabird colonies

ACTIVITY A: Evaluation or monitoring to determine if additional solutions are needed

Potential monitoring activities may be necessary to evaluate disturbance from kelp harvesting, lighting from squid fishing vessels, and aquaculture pens and gear entanglement. Potential solutions may include re-directing or shielding light sources in some fashion, and modifications to fishing gear and aquaculture pens to reduce bycatch and entanglement. Determine if aquaculture pens should be redesigned to reduce entanglement of seabirds.

Fishing boats have been observed driving over whales on occasion and in doing so inadvertently snagging their gear on the animal. This issue may need to be examined more closely and perhaps an onsite enforcement officer should be present on the water at critical times of year.

Project status:
Potential partners:
Estimated costs:

ACTIVITY C: Interagency coordination on bycatch reduction

The MBNMS should coordinate with NOAA fisheries to ensure that levels of bycatch and other fishery impacts are consistent with the resource protection goals of the Sanctuary. Investigation into other means of bycatch reduction should be conducted where appropriate.

STRATEGY #6 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY ACOUSTICS

This strategy recognizes the need to address disturbance by acoustic impacts –potential issues the workgroup is concerned with are the effects of acoustics on marine mammals by ships, the military, research or other influences.

ACTIVITY A: Research and monitoring

Potential strategies to address the above issue include gathering more information and data on the effects of sound in the marine environment. The MBNMS should continue to be apprised of survey and monitoring activities that are evaluating the effects of sound.

Project status:
Potential partners:
Estimated costs:

ACTIVITY B: Evaluation of individual projects

The MBNMS should continue evaluating individual proposals on a case-by-case basis to determine impacts of proposed projects, and make management recommendations.

Project status:
Potential partners:
Estimated costs:

STRATEGY #7 REDUCE DISTURBANCE OF TURTLES

ACTIVITY A:

Potential strategies to address the disturbance of sea turtles in the MBNMS include working with NOAA Fisheries on further evaluation of sea turtle tracking projects, evaluation of stranding data, and developing a program to identify common sea turtle disturbance or harassment activities.

The MBNMS will work with those involved in regional sea turtle research activities to determine primary threats, known disturbance activities, and strategies to reduce disturbance.

Project status:
Potential partners:
Estimated costs:

STRATEGY #8 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY PROVIDING FUNDING FOR CRITICAL PROGRAMS

Potential strategies to address the above issue include securing outside funding sources to accomplish programs. The MBNMS often works with other entities to accomplish Sanctuary goals. This is critical as budget constraints are often an obstacle.

ACTIVITY A:

Potential strategies to address the above issue include considering funding source possibilities and potential implementation partners, as well as integrating strategies with other agencies plans, etc

Project status:
Potential partners:
Estimated costs:

STRATEGY #9 REDUCE DISTURBANCE OF MARINE MAMMALS, SEABIRDS, AND TURTLES BY ENFORCEMENT

This strategy recognizes the need to address disturbance by increasing both the on-the-water and on-land presence of Sanctuary enforcement in an effort to complement education efforts.

ACTIVITY A:
It is critical to strengthen the availability of surveillance and enforcement capabilities, and to increase the visibility of the Sanctuary enforcement to enhance educational efforts. In recent years reports of Sanctuary violations have not fully reached fruition due to complex legal pathways. It would be beneficial to the Sanctuary if the option to write an offender an on-the-spot ticket were in place. The MBNMS should therefore investigate a summary settlement process, which would allow tickets or fines to be levied to offenders. Enforcement of Sanctuary violations should be strengthened to ensure greater protection of the Sanctuary.

Partnerships with other state and federal agencies should be investigated to further protect Sanctuary resources.

Better coordination between MBNMS education and enforcement programs should be implemented. Criteria should be developed in order to decide when to use education or enforcement.

ACTIVITY B: Regulatory review
Review of effectiveness and enforcement of existing laws and Sanctuary regulations.

ACTIVITY C: Outreach
There is some confusion among members of the public as to what the MBNMS regulations are and who to contact in the event of a violation. It would be helpful to define a system of referrals from docents or the general public to the enforcement officer. The MBNMS should develop coordinated training with enforcement personnel and docents on how to effectively report Sanctuary violations.

Project status:
Potential partners:
Estimated costs:

Issues already resolved (to include in action plan):

- Fireworks

Finalize approval of 5-year permit with USFWS and NOAA Fisheries which outlines permit conditions and maximum number of firework allowed at various locations.

Timeline for drafting MBNMS framework action plan: January 2003 – April 2003.